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**PATENT**

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William R. Allen  
William R. Allen, Reg. No. 48,389

15 March 2006  
Date

Applicants: Toshiharu Furukawa et al.  
Serial No.: 10/711,764  
Filed: October 4, 2004  
Art Unit: 2823  
Examiner: Jarrett J. Stark  
Confirmation No.: 5763  
Title: LOW-K DIELECTRIC MATERIAL BASED UPON CARBON NANOTUBES  
Atty Docket No.: IBM-319

Cincinnati, Ohio 45202

March 15, 2006

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT**

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Sir:

In accordance with the duty of candor and good faith imposed by 37 C.F.R. §1.56 and means of complying therewith according to 37 C.F.R. §§1.97 and 1.98, the references listed on the attached Form PTO-1449 are called to the attention of the United States Patent and Trademark Office in connection with the above-identified patent application.

Subject to the Office's waiver of providing copies of U.S. patents and published applications for applications filed after June 30, 2003, only foreign references and articles are provided, since this application was filed on October 4, 2004, and therefore, subsequent to June 30, 2003.

The Examiner is urged to consider all of the cited documents and to make an independent evaluation of the teachings and materiality of each.

Applicants believe that no fee is due in connection with this communication. However, if this is not the case, the Commissioner is authorized to charge deposit account 23-3000 for any required fees.

Respectfully submitted,

WOOD, HERRON & EVANS, L.L.P.

BY William R. Allen  
William R. Allen  
Reg. No. 48,389

2700 Carew Tower  
441 Vine Street  
Cincinnati, OH 45202  
(513) 241-2324

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| SUBSTITUTE FORM PTO-1449<br>(MODIFIED)  |  | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE |  | ATTY. DOCKET NO.<br>IBM/319            |  | SERIAL NO.<br>10/711,764 |  |
| INFORMATION DISCLOSURE<br>STATEMENT BY APPLICANT<br>(Use several sheets if necessary) |  |  |  | APPLICANT<br>Toshiharu Furukawa et al. |  |                          |  |
|   |  |  |  | FILING DATE<br>October 4, 2004         |  | GROUP<br>2823            |  |

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(37 C.F.R. 1.98(b))

| U.S. PATENT DOCUMENTS |     |               |   |   |   |   |   |   |               |                |       |          |                               |
|-----------------------|-----|---------------|---|---|---|---|---|---|---------------|----------------|-------|----------|-------------------------------|
| EXAMINER<br>INITIAL   |     | PATENT NUMBER |   |   |   |   |   |   | ISSUE<br>DATE | PATENTEE       | CLASS | SUBCLASS | FILING DATE<br>IF APPROPRIATE |
|                       | A.A | 5             | 2 | 2 | 7 | 0 | 3 | 8 | 7/13/1993     | Smalley et al. | 204   | 173      | 10/4/1991                     |
|                       | A.B | 5             | 3 | 0 | 0 | 2 | 0 | 3 | 4/5/1994      | Smalley        | 204   | 157.41   | 11/27/1991                    |
|                       | A.C | 6             | 7 | 0 | 6 | 4 | 0 | 2 | 3/16/2004     | Rueckes et al. | 428   | 408      | 4/23/2002                     |
|                       | A.D | 6             | 7 | 0 | 6 | 5 | 6 | 6 | 3/16/2004     | Avouris et al. | 438   | 132      | 5/13/2002                     |
|                       | A.E |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.F |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.G |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.H |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.I |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.J |               |   |   |   |   |   |   |               |                |       |          |                               |
|                       | A.K |               |   |   |   |   |   |   |               |                |       |          |                               |

| FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS |     |                    |                     |                             |       |          |                         |
|--|-----|--------------------|---------------------|-----------------------------|-------|----------|-------------------------|
|  |     | DOCUMENT<br>NUMBER | PUBLICATION<br>DATE | COUNTRY OR<br>PATENT OFFICE | CLASS | SUBCLASS | TRANSLATION<br>(YES/NO) |
|  | A.L |                    |                     |                             |       |          |                         |
|  | A.M |                    |                     |                             |       |          |                         |
|  | A.N |                    |                     |                             |       |          |                         |
|  | A.O |                    |                     |                             |       |          |                         |
|  | A.P |                    |                     |                             |       |          |                         |
|  | A.Q |                    |                     |                             |       |          |                         |

| OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication) |     |   |
|---|-----|---|
|   | A.R | Hirata, U.S. Patent Application Publication No. US 2004/O018138 A1, Publication Date 1/29/2004  |
|   | A.S | E.T. Michelson et al., <u>Solvation of Fluorinated Single-Wall Carbon Nanotubes in Alcohol Solvents</u> , J. Phys. Chem. B, Vol. 103, No. 21 (1999) (pages 4318-4322) |
|   | A.T | P.J. Boul et al., <u>Reversible Sidewall Functionalization of Buckytubes</u> , Chemical Physics Letters, 3 September 1999, pp. 367-372                                |
| EXAMINER  |     | DATE CONSIDERED   |

EXAMINER: Initial if citation considered, whether or not in conformance. Draw line through citation only if not in conformance and not considered. Include a copy of this form with next communication to applicant.

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| SUBSTITUTE FORM PTO-1449<br>(MODIFIED)   |     | U.S. DEPARTMENT OF COMMERCE<br>PATENT AND TRADEMARK OFFICE  |                     | ATTY. DOCKET NO.<br>IBM/319            |       | SERIAL NO.<br>10/711,764 |                               |
| INFORMATION DISCLOSURE<br>STATEMENT BY APPLICANT<br><br>(Use several sheets if necessary)  |     |   |                     | APPLICANT<br>Toshiharu Furukawa et al. |       |                          |                               |
|  |     |   |                     | FILING DATE<br>October 4, 2004         |       | GROUP<br>2823            |                               |
| U.S. PATENT DOCUMENTS  |     |   |                     |  |       |                          |                               |
| EXAMINER<br>INITIAL  |     | PATENT NUMBER   | ISSUE<br>DATE       | PATENTEE                               | CLASS | SUBCLASS                 | FILING DATE<br>IF APPROPRIATE |
|  | B.A |   |                     |  |       |                          |                               |
|  | B.B |   |                     |  |       |                          |                               |
|  | B.C |   |                     |  |       |                          |                               |
|  | B.D |   |                     |  |       |                          |                               |
|  | B.E |   |                     |  |       |                          |                               |
|  | B.F |   |                     |  |       |                          |                               |
|  | B.G |   |                     |  |       |                          |                               |
|  | B.H |   |                     |  |       |                          |                               |
|  | B.I |   |                     |  |       |                          |                               |
|  | B.J |   |                     |  |       |                          |                               |
|  | B.K |   |                     |  |       |                          |                               |
| FOREIGN PATENTS OR PUBLISHED FOREIGN PATENT APPLICATIONS   |     |   |                     |  |       |                          |                               |
|  |     | DOCUMENT<br>NUMBER  | PUBLICATION<br>DATE | COUNTRY OR<br>PATENT OFFICE            | CLASS | SUBCLASS                 | TRANSLATION<br>(YES/NO)       |
|  | B.L |   |                     |  |       |                          |                               |
|  | B.M |   |                     |  |       |                          |                               |
|  | B.N |   |                     |  |       |                          |                               |
|  | B.O |   |                     |  |       |                          |                               |
|  | B.P |   |                     |  |       |                          |                               |
|  | B.Q |   |                     |  |       |                          |                               |
| OTHER DOCUMENTS (Including Author, Title, Date, Place of Publication)  |     |   |                     |  |       |                          |                               |
|  | B.R | Bahr, Jeffrey L. et al., <u>Covalent Chemistry of Single-Wall Carbon Nanotubes</u> , J. Mater. Chem. 2002. 12. pp. 1952-1958                                |                     |  |       |                          |                               |
|  | B.S | E.T. Mickelson et al., <u>Fluorination of Single-Wall Carbon Nanotubes</u> , Chemical Physics Letters 296 (1998), pp. 188-194                               |                     |  |       |                          |                               |
|  | B.T | Cao, Anyuan et al., <u>Direction-Selective and Length-Tunable In-Plane Growth of Carbon Nanotubes</u> , Adv. Mater. 2003, 15, No. 13, July 4, pp. 1105-1109 |                     |  |       |                          |                               |
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